

The plant though very distinct from any American species, is yet more nearly allied to our *V. sagittata* and *V. cucullata* than to any species of Europe or of Western America,—another instance of the close relationship, pointed out by Dr. Gray, between the Flora of northeastern Asia and that of northeastern America. *V. chinensis* has a long, stout, somewhat branching root, and seems well prepared to withstand drought, or the hot sun of open fields. The flower is lilac-purple; the spur 7 mm. long, rounded at the end, much compressed laterally, being 4 mm. wide but only 1.5 mm. thick. The numerous cleistogamous capsules are ovoid, green, on erect peduncles. Most of the stations named are populous cities of Japan or Eastern China; from which we may surmise that the species is more or less domesticated, and thrives in cultivated ground in the Orient, as it certainly does with us.

MIDDLEBURY, VERMONT.

## SPHAGNUM FAXONII; AN ADDITION TO THE FLORA OF NEW ENGLAND.

CARL WARNSTORF.

SINCE my friend the late Edwin Faxon was one of the original members of the New England Botanical Club, it seems fitting that the Sphagnum which I have recently named in his memory should be brought to the attention of his old associates by publishing in RHODORA a translation of the original description.<sup>1</sup> I wish to say, by way of preface, that Mr. Faxon, an indomitable collector of Sphagna, sent me for investigation during the nineties thousands of specimens from New England, all prepared with the most pains-taking care. To many others than myself "Sphagna Boreali-Americana Exsiccata," an extremely noteworthy collection of one hundred seventy-two representative specimens of American peat mosses issued by Faxon in collaboration with Professor D. C. Eaton, stands as testimonial to his persevering and accurate work as a collector. Faxon was preëmi-

<sup>1</sup> Neue europäische und aussereuropäische Torfmoose. Hedwigia XLVII. p. 117 (1908).



nently lovable, unselfish, and modest,—such a man as I have but seldom come in contact with during my life. He translated my “Contributions to the Knowledge of the North American Sphagna” for publication in the Botanical Gazette,<sup>1</sup> but although I urged him to do so, he did not associate his own name with the articles. I hope that in describing the following moss I have permanently connected the name of this truly exceptional man with his favorite genus.

*SPHAGNUM FAXONII* Warnst. Forming closely compacted tufts as much as 12 cm. deep, below grayish-brown, above pale yellowish, in habit similar to a weak *Sph. cuspidatum* var. *plumosum*. Cortex of two or three layers of cells, plainly differentiated from the strong, pale or yellowish woody axis. Prosenchyma cells widened and thick-walled. Stem leaves (both dry and moist) spreading, isosceles-triangular or in part almost triangular-linguiform, 0.75–1.00 mm. long and 0.50–0.60 mm. broad, at the narrow truncate apex minutely denticulate, otherwise entire, with broad margins which are greatly expanded below the middle. Hyaline cells either not at all or only occasionally septate, fibrillose in the upper third or even to the middle of the leaf, on the inner surface mostly with a few unringed pores between the fibrils, on the outer surface, toward the apex, with a few small corner-pores. Fascicles moderately crowded, generally three- but occasionally four-branched. Branches almost equally strong and spreading, up to 12 mm. in length, attenuated toward the apex; their leaves crowded, when dry not or hardly at all undulate, when moist slightly turned to one side, lanceolate, on the average 1.40–1.45 mm. long and 0.30–0.35 mm. wide, at the broad truncate apex coarsely three- or four-toothed, narrowly margined by two or three rows of elongated cells, involute clear to the base so as to be almost tubular, entire. Hyaline cells reënforced by numerous fibril-bands, on the inner surface of the leaf with comparatively few generally unringed medium sized pores in the cell angles, on the outer surface with hardly any pores except in the lower cell angles, but occasionally weakly ringed pseudo-pores occur in short rows along the commissures of scattered cells. Chlorophyll cells in cross-section usually trapezoidal and exposed on both sides of the leaf, with the longer of the parallel sides exposed on the outer surface, but triangular cells occur sporadically, in which case they are enclosed on the inner surface of the leaf by the

<sup>1</sup> Bot. Gaz. XV pp. 127–140, 189–198, 217–227, 242–255. (1890.)



strongly under-arching hyaline cells.— Massachusetts, 16 Sept., 1891, leg. Faxon.

This species may be distinguished from *Sph. cuspidatum* by the very narrowly margined branch leaves, from *Sph. angustilimbatum* by much smaller stem leaves which are not fibrillose to the base, and which have the margins broadened below, as well as by the mostly three-branched fascicles with equally divergent branches.

FRIEDENAU, 25 Feb. 1908.

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NOMENCLATORIAL CHANGES IN ISOËTES.—ISOËTES MACROSPORA Dur., var. **heterospora**, comb. nov. *Isoëtes heterospora* A. A. Eaton appears to be a form of *I. macrospora* Dur., endemic in streams and ponds on Mt. Desert Island. The vegetative parts of the two appear to be practically identical, differences being confined to the spores, which vary greatly in size and markings in the Mt. Desert plants. I therefore think it proper to reduce *I. heterospora* to the rank of a variety of *I. macrospora*.

*I. DODGEI* A. A. Eaton, var. **Robbinsii**, comb. nov. In compliance with Art. 49 of the Vienna Code the name *I. Dodgei* must be restored to the species designated by Engelmann as *I. riparia*, var. *canadensis* (*I. canadensis* A. A. Eaton), since it is the earliest name of the plant in its present rank. It becomes necessary, therefore, to change *I. canadensis*, var. *Robbinsii* to *I. Dodgei*, var. *Robbinsii*.—A. A. EATON, The Ames Botanical Laboratory, North Easton, Massachusetts.

## A SOUTHERN FLORA AND FAUNA OF POST-PLEISTOCENE AGE IN ESSEX COUNTY, MASSACHUSETTS.

JOHN H. SEARS.

THIS paper is the result of special studies upon a fossil or ancient marine molluscan fauna, collected in estuaries and bays on our coast, with a view to explaining the presence of certain plants of a southern flora found growing today in Essex County, Massachusetts, and elsewhere near the coast of New England. The data and conclusions of the paper may be stated under three headings.